straight one, as it is represented above. It is quite probable that the line began to break with the appearance of the starfish.—*Johns Hopkins University Circulars*, March 1885, p. 67.

A new Freshwater Sponge from Nova Scotia.

Mr. E. Potts described a form recently identified by him as follows :—

Heteromeyenia pictouensis, n. sp.

Sponge light green, even when dry, massive, incrusting; texture very compact; spicules non-fasciculated, persistent; surface mostly smooth.

Gemmules very scarce, spherical, crust thick.

Skeleton-spicules cylindrical, short, robust, rounded or abruptly terminated; entirely spined, spines conical at the centre of the spicule, elsewhere generally curving *forward*, or towards each extremity. Rounded terminations of spicules covered with short spines, though frequently a single large spine or acute termination is seen at one or both extremities.

Dermal spicules absent or undiscovered.

Birotulates of the longer class surrounding the gemmules, rather numerous, one half longer than the others; shafts conspicuously fusiform or largest at the centre, where are frequently found one or more long spines. Their rotules consist of from three to six irregularly placed rays, recurved at the extremities.

Birotulates of the shorter class abundant and compactly placed around the gemmule; shafts mostly smooth, though sometimes bearing a single spine, irregularly cylindrical, but rapidly widening to support the rotules, which are large, umbonate, nearly flat, and finely lacinulate at their margins; occasionally bearing spines.

Measurements. Skeleton-spicules 0·0075 inch long by 0·00075 inch thick; length of long birotulates 0·0021 inch, of short birotulates 0·0012 inch; diameter of disk of latter 0·0009 inch.

Habitat. On submerged wood &c.

Locality. Collected only by or for Mr. A. H. McKay, B.A., B.S., of Pictou, Nova Scotia, from several lakes upon the watershed of that region.

This beautiful and interesting sponge was first discovered by Mr. McKay during the summer of 1884. At that time its novelty, as indicated by its unusually robust entirely spined skeleton-spicules, was easily recognized; but the absence of gemmules at that season precluded the determination of its generic relations, and it has continued unnamed. During the last week of December, however, a further search was rewarded by the finding of other "specimens upon sticks pulled up through a break made in the ice," and amongst these a few, and but a few, gemmulæ have now been discovered.

These suffice to place it clearly within the genus *Heteromeyenia*, near *H. Ryderii*, while the peculiarities of its birotulates distinguish it from that or any other species.

Mr. Potts called attention to its green and apparently living and growing condition, during midwinter, in that northern latitude, as indicating that like *Spongilla aspinosa*, of the New Jersey swamps, this species also is an "evergreen," continuing its life in the normal state throughout the year, and for this reason not needing to form "protected gemmules" in such abundance as do other species.

At the suggestion of Mr. McKay, to whose enthusiastic search we owe its discovery, the local specific name *pictouensis* has gladly been given to this species.—*Proc. Acad. Nat. Sci. Philad.*, Feb. 24, 1885, p. 28.

An Example of Samia Cecropia *having a fifth Aborted Wing.*

By Hermann Strecker.

I have lately received from Mr. Ph. Laurent, of Philadelphia, an example of *Samia Cecropia*, bred by him from a cocoon, having an aborted, or rather the portion of a third primary. It is a male of the ordinary size, expanding about 5½ inches, and is one of those smoky varieties in which the red portion of the transverse bands on the wings is very much narrowed. The right primary and both secondaries are normal in shape and marking. The left primary is in length from base to apex exactly the same as is the right; but in width from inner angle across to the costa it is $\frac{3}{16}$ inch less; the markings are the same, allowing for a little condensing owing to the difference in the width. The venation is normal in all the wings; the left primary is also somewhat narrower at the base where it joins the body: the inner margin is in exact line with that of its fellow, thus causing the wing at costa, where it joins the thorax, to be further in from the collar and head than its opposite.

The third primary, or rather portion of a primary, emerges from the side of the collar, and consists mainly of the costal and subcostal nervures, a small part of the median nervure, and a strip of wing about a quarter of an inch wide; but the latter was much curled and twisted in drying, and does not show this width fully. Its length is about two thirds that of the normal wing, with which it runs parallel, but it is in no way visibly connected therewith.

This form of monstrosity is apparently of exceedingly great rarity. I have heard of only three other instances—those recorded by Prof. Westwood in the Trans. Ent. Soc. Lond. 1879, pp. 220, 221, in which three diurnals are described, each possessing a third aborted right-hand secondary. In one of them, an example of *Gonepteryx Rhamni*, the normal right wing is much less than the left, the same with the second example, a *Vanessa Urticæ*, leading to the conclusion in those cases, as with the *Cecropia*, that the abnormal wing was produced at the expense of the normal.

In the two cases just cited, the extra wing is joined at the base of the costa to the proper wing; in the third case mentioned by Prof. Westwood, it is apparently a streak or strip, as it were, on the inferior surface of right secondary, distinguished from the rest of the wing, or the part thereof, by the difference in colour and marking alone.